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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/055,279	01/22/2002	Roy J. Byrd	YOR920010750US1	6772				
7590 07/17/2007								
Louis J. Percello Intellectual Property Law Dept. IBM Corporation P.O. Box 218 Yorktown Heights, NY 10598		<table border="1"><tr><td>EXAMINER</td></tr><tr><td>VO, HUYEN X</td></tr></table>			EXAMINER	VO, HUYEN X		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/055,279

Applicant(s)

BYRD ET AL.

Examiner

Huyen X. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 4/10/2007 have been fully considered but they are not persuasive.
2. With respect to applicant's argument regarding "the lookup of Malsheen does not generate a pattern based on the expression value that defines the expansion value" (*third paragraph, page 8 of the response section*), examiner maintains previous grounds of rejections. Since the claim language does not show specific steps describing how definition patterns are generated, the term "generation process" can be interpreted as a process of retrieving predefined definition patterns from the database. Also, according to [www.dictionary.com](http://www.dictionary.com), the word "generate" is defined as "*to bring into existence; cause to be; produce*". So, regardless how definition patterns are generated, any process that produces definition patterns or brings definition patterns into existence, including lookup table, is considered a definition generation process.
3. With respect to applicant's argument regarding "abbreviation pattern generation process", Larkey et al. teach this feature in that an Acrophile database containing model abbreviation patterns and associated definition patterns. When the user enters text words, the system of Larkey analyzes the input text words and generates a list of possible abbreviation pattern (i.e. Internal Revenue or revenue). Similar to the above, since the claim language does not show specific steps describing how abbreviation

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patterns are generated, the term "generation process" can be interpreted as a process of retrieving predefined abbreviation patterns from the database. Also, according to [www.dictionary.com](http://www.dictionary.com), the word "generate" is defined as "*to bring into existence; cause to be; produce*". So, regardless how abbreviation patterns are generated, any process that produces abbreviation patterns or brings definition patterns into existence, including lookup table, is considered an abbreviation generation process.

4. Based on the claim language, both the abbreviation pattern generation process and the definition pattern generation process are two independent processes that are not dependent on or referring to each other. Applicant is advised to amend the claim to include a limitation that compares results of the two generation processes as indicated in the argument section (first paragraph, page 9) to make the two generation processes referring to each other.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malsheen et al. (US 5634084) in view of Larkey et al. (Publication included in the IDS)

7. Regarding claims 1 and 21-22, Malsheen et al. disclose a system and method for matching one or more abbreviations and one or more definitions, comprising: a definition pattern generation process that generates one or more definition patterns corresponding to the candidate definitions (*col. 7, line 20 to col. 8, line 54*) but fail to specifically disclose an abbreviation pattern generation process that generates one or more abbreviation patterns corresponding to candidate abbreviations. However, Larkey et al. teach an abbreviation pattern generation process that generates one or more abbreviation patterns corresponding to candidate abbreviations (*referring to figure 1 and/or referring to building and updating the database section on page 207*).

Since Malsheen et al. and Larkey et al. are analogous art because they are from the same field of endeavor, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Malsheen et al. by incorporating the teaching of Larkey et al. in order to generate acronyms/abbreviation models for subsequent use by the system to correctly identify acronyms.

8. Regarding claim 2, Malsheen et al. further disclose a system, as in claim 1, further comprising: a set of abbreviation rules that correlate abbreviation patterns to definition patterns using one or more formation rules (*col. 7, line 63 to col. 8, line 24*); a lookup process that selects one or more formation rules, being selected formation rules, corresponding to the abbreviation pattern of the candidate abbreviation and the definition pattern of the candidate definition (*col. 7, line 63 to col. 8, line 24, by*

*determining what's preceded the abbreviation*); and a rule application process that applies the selected formation rules to determine which candidate definitions match the candidate abbreviation (*col. 7, line 63 to col. 8, line 24*).

9. Regarding claims 3-4, Malsheen et al. further disclose a system, as in claims 1 and 2 respectively, further comprising: one or more matching algorithms that match one or more pairs of abbreviations and definitions based on the abbreviation patterns and the definition patterns (*elements 132-152, abbreviation expansion algorithm, number expansion algorithm, acronym and initialism expansion algorithm*).

10. Regarding claim 5, Malsheen et al. further disclose a system, as in claim 4, where rule application process and the matching algorithm apply both rule based and non-rule based matching processes to match one or more abbreviations and one or more definitions (*col. 8, line 1 to col. 9, line 67*).

11. Regarding claims 6-7, Malsheen et al. further disclose a system, as in claim 1, further comprising: a method for specifying pairs, each of which contains a candidate abbreviation and a candidate definition, for each pair generating an abbreviation patterns and a definition pattern (*col. 8, line 1 to col. 9, line 67, after comparing with the contents of the abbreviation table 146, city-state table 147, and morph table 152, a match is identified or specified*), where the pairs an existing abbreviation database pair (*abbreviation table 146*).

12. Regarding claims 8-12, Malsheen et al. further disclose a system, as in claim 1, further comprising: an abbreviation recognition process that finds one or more candidate abbreviations in text (*text classifier 136 and/or text expander 140 in figure 2*), a definition finding process that locates one or more candidate definitions corresponding to the candidate abbreviation (*element 146 includes abbreviations in association with corresponding definitions*), and a best match selection process that chooses a best candidate definition from the matched candidate definitions using one or more criteria (*col. 8, lines 1-54, using rules*), wherein a best match selection mechanism that employs one or more weighting features (*col. 8, lines 1-54, weighting features being rules*), and wherein the weighting features may rule priority of the formation rule that matched the pair and/or capitalization of the definition (*col. 8, lines 1-54, weighting features being rules and col. 5, line 50 to col. 6, line 19, upper case and lower case letters*).

13. Regarding claim 13, Malsheen et al. further disclose a system, as in claim 1, further comprising: an output process that outputs the candidate abbreviation and the matched candidate definition as confirmed pairs (*output of the text expander 140*).

14. Regarding claims 14-18, Malsheen et al. further disclose a system, as in claim 2, where the formation rule that produced the best candidate definition is weighted better due to the choice of the best candidate definition (*col. 8, lines 1-54, using rules*), and a process for adding new abbreviation rules in the existing set of abbreviation rules

*(abbreviation table is just a memory slot storing abbreviations. Thus, adding or deleting abbreviations to or from memory is known to one of ordinary skill in the art), and a mechanism for generating one or more new abbreviation rules when no formation rules successfully match high-quality pairs of candidate abbreviations and definitions (col. 8, lines 1-54, rules stored in abbreviation expansion procedure 148 can be update since the abbreviation expansion procedure is only a memory slot), and a process for automatically adding the generated abbreviation rules to the existing set of abbreviation rules (col. 8, lines 1-54, rules are developed and installed into the system before the system could be fully functional), and a rule generation process for generating abbreviation rules from pairs of abbreviations and definitions (col. 8, lines 1-54).*

Regarding claims 19-20, Malsheen et al. further disclose a system, as in claim 1, further comprising: a set of layered matching algorithms which are based on the relationship between the lengths of abbreviation patterns and the lengths of definition patterns *(col. 8, lines 1-54, abbreviation is shorter than the definition)*, and wherein each algorithm in the layered matching mechanism is applied in priority sequence *(col. 8, lines 1-54)*.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within



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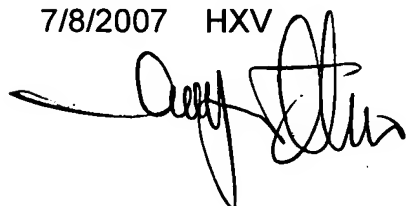
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/8/2007 HXV

A handwritten signature in black ink, appearing to be 'Huyen X. Vo', is written over the date and initials.